

MSRRPWLLALALAVALAAGSAGASTGSDATVPVATQDGPDYVFHRAHERMLFQTSY
TLENNGSVICIPNNGQCFCCLAWLKSNGTNAEKLAANILQWITFALSALCLMFYGYQTW
KSTCGWEEIYVATIEMIKFIIIEYFHEFDEPAVIYSSNGNKTWVLRVYAEWLLTCPVILIHLS
NLTGLANDYNKRTMGLLVSDIGTIVWGTTAALSKGYVRVIFFLMGLCYGIYFFNAAKV
YIEAYHTVPKGICRDLVRYLAWLYFCSWAMFPVLFLLGPEGFGHINQFNSAIAHAILDL
ASKNAWSMMGHFLRVKIHEHILLYGDIRKKQKVNAGQEMEVETMVHEEDDETQKV
PTAKYANRDSFIIMRDLKEKGFETRASLDGDPNGDAEANAAAGGKPGMEMGKMTG
MGMGMGAGMGMATIDSGRVILAVPDISMVDFFREQFARLPVPYELVPALGAENTLQL
VQQAQSLGGCDFVLMHPEFLRDRSPTGLLPRLKMGGQRAAAFGWAAIGPMRDLIEG
SGVDGWLEGPSFGAGINQQALVALINRMQQAKKMGMGMGMGMGMGGGMGMGM
GMGMGMAPSMNAGMTGGMGGASMGGA VMGMGMGMQPMQQAMPAMSPMMTQ
QPSMMSQPSAMSAGGAMQAMGGVMPSAPGGRVGTNPLFGSAPSPLSSQPGISP
GMATPPAATAAPAAGGSEAEMLQQLMSEINRLKNELGE

Fig. 1A

MDYGGALSAVGRELLFVTNPVVVNGSVLVPEDQCYCAGWIESRGTNGAQTASNVLQ
WLAAGFSILLMLFYAYQTWKSTCGWEEIYVCAIEMVKVILEFFFEFKNPSMLYLATGH
RVQWLRYAEWLLTCPVILIHLSNLTGLSNDYSRRTMGLLVSDIGTIVWGATSAMATGY
VKVIFFCLGLCYGANTFFHAAKAYIEGYHTVPGRCRQVVTGMAWLFFVSWGMFPIL
FILGPEGFGVLSVYGSTVGHTIIDLMSKNCWGLLGHYLRVLIHEHILIHGDIRKTTKLNIG
GTEIEVETLVEDEAEAGAVNKGTKGYASRESFLVMRDKMKEKGIDVRASLDNSKEVE
QEQAARAAMMMMNNGMGMGMGMNGMNGMGGMNGMAGGAKPGLELTPQLQP
GRVILAVPDISMVDFFREQFAQLSVTYELVPALGADNTLALVTQAQNLGGVDFVLIHP
EFLRDRSSTSILSRIRGAGQRVAAGWAQLGPMRDLIESANLDGWLEGPSFGQGILP
AHIVALVAKMQQMRKMQQMQQIGMMTGGMNGMGGGMGGGMNGMGGGNMNMN
MGNGMGGGMNGMGGNGMNGMGGGNMNMNMGGNGMAGNGMGGGMGGNGM
GGSMNGMSSGVVANVTPSAAGGMGGMMNGGMAAPQSPGMNGGRLGTNPLFNAA
PSPLSSQLGAEAGMGSMMGGMGGMSGMGGMGGMGGMGGAGAATTQAAGGNAEA
EMLQNLNMNEINRLKRELGE

Fig 1B

MlptavegvsqAQITGRPEWIWLALGTALMGLGTLYFLVKGMGVSDPDAKKFYAITTLVPAIAFT
MYLSMLLGYGLTMVPFGGEQNPIYWARYADWLFTTPLLLLDLALLVDADQGTILALVGADG
IMIGTGLVGALTkvysyrfVWWAISTAAMLYILYVLFfGFTSKAESMRPEVASTFKVLRNVT
VWLWSAYPVWVLIGSEGAGIVPLNIETLLFMVLDVSAKVGfGLILLRSRAIFGEAEAPEPSAG
DGAAATSD

Fig. 1C

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Chop1..MSRRPWLLALALAVALAAGSAGASTGSDATVPVATQDGPDYVFHRAHERMFQTSYTLEN 60
Chop2.....MDYGGALSAVGNEELFVTNPVVV 23
Bop.....M

* *
Chop1..NGSVICIPNNGCFCFLAWLKN--GTNAEKLAANILOWITFALSACLMEYGYGMRKSTC 118
Chop2..NGSVL-VPED-QCYCAGNIESR--GTNGAQTASNVLOWLAAGFSIILLMEVAYGMRKSTC 79
Bop..LPTAVEGVSQAITGRPEWIWLALTALMGGTLYFLVKGMAVSPDAKKEYAITLVPA 51

* * * * *
Chop1..GWEETAVATTEMIKFTIEYTHEEDEPAVYSSNCKTVMLRYAEWELTCEVILLESNLT 178
Chop2..GWEETAVCAEMVKVELEFFEFKNSMLLATCHRVQWLYAEWELTCEVILLESNLT 139
Bop..IAFTM---LSMLLGYGLTMVPEGEQ-----PIYARADMSFTTPLLLDSA-SL 100

* * * * *
Chop1..GLANDYNGRM-GLIVSDIGTIVMGTTAASKGV-RVIFFLMGLCYGIYTEFNAR-KV 235
Chop2..GLSNQYSRAM-GLIVSDIGTIVMGATSAMATGV-KVIFCLGLCYGANTEEHAR-KAY 196
Bop..V-DAS-Q-GLILAVGADGIMGTGLVGALKVSYRFVWWAISTAAMLLILYVLFFGFT 157

* * * * *
Chop1..TEAYFTVPKGICDLVRYLAMYFCSAMGYVELLGPEEGGHINOFNSAIAHANDIAS 295
Chop2..TEGYHTVPKRCRQVTGMANLFEVSGMSILILGPGFALLSVYGTVGHITALMS 256
Bop..SKESMREV--ASTFKVRNVTVVLSAFWMSIGSEGAGIVPLNIETLLFMVDSSA 215

#
Chop1..RNASMMGHFLRVKTHEHTLYEDIRKQVIVAGQMEVETMHEEDDETQKVP-PAK 354
Chop2..KNCGLLGHYLRVLTHEHTIHGDIRTTLNIGTEIEVETLEDAEAGAVNGKIG 316
Bop..KVGGLI--LLESRAIFGEAEAPEPSAGDGA-ATSD

Chop1..ANDSEIIMERLKEKGFETASLEGDPNGDABANAAAGGKPGMEMGKMTGMSMGAG 414
Chop2..ASESELVMRDKMKEKIDVASLSNSKEVEQQARAMMMMNGNGMGMGMNGMNG 376

Chop1..GMATIDS-----GRVILAVEDISMVDFPREQPARLPVPYELVPALGANT 459
Chop2..GMNGMAGGAKPGLELTPQLQPEVILAVEDISMVDFPREQQLSVTYELVPALGADNT 436

Chop1..LQVQACSLGCCDFVMHPFLERSPGLIPELKMGQRAAAFGWAIGFMRDLTEGS 519
Chop2..LALVTQAONLGGVDEVTHPEFLRDRSSILSRLGAGQRVAFGWAQLGMRDLTESA 496

Chop1..GVDCHLEGPSFGAGINQALVALINRQGAKMGMG-----GMGMGMGGGMG-M 568
Chop2..NLDCHLEGPSFGQILPAHIVALVAKQMRKMOQQIGMMTGGMNGMGCGMGCGMGNG 556

Chop1..GMGMMG-MAPSMNACHTCGMG---ASMG-----AVMGMGGMOPQQAMP--AMSPM 616
Chop2..GGNGMMNNNGMGGGNGMGCGNGMGGGNGMMMGNGMAGNGGGGGNGGG 616

Chop1..MTQQPS-MMSQSAMSAGGAMOAMGVMPSEAP----GRVGTINPLEGSAPSPLSSQ--- 667
Chop2..NGMSSGVVANVTPSAAGGMGMNGGAAPQSPGMNGRLGTINPLENAAPSPLSSQLGA 676

Chop1.....PGISPGMATPPAATAAPRAAGSEAEMIQQLMSPIININ-ELGEK 712
Chop2..EAGMSMGGMMGMSGMGMGMGGAGAATTQAGGAEMQNLMNEINRLKREGE 737

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Fig. 1D

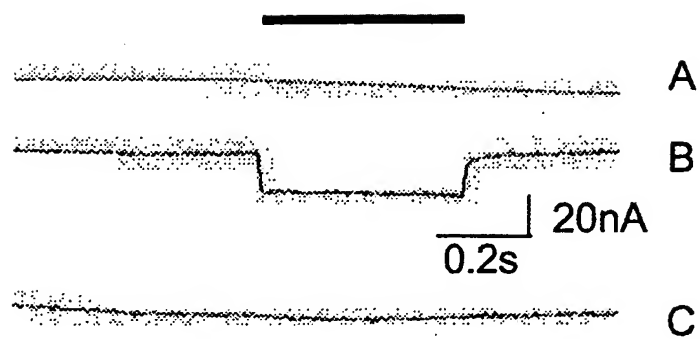
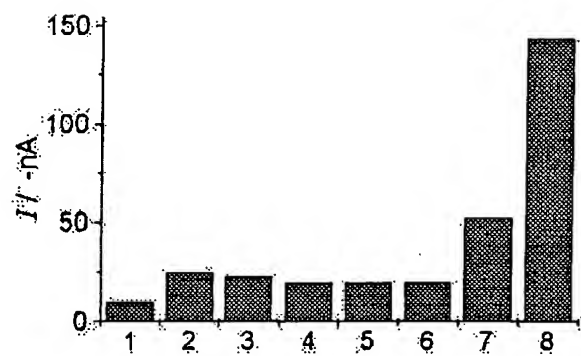
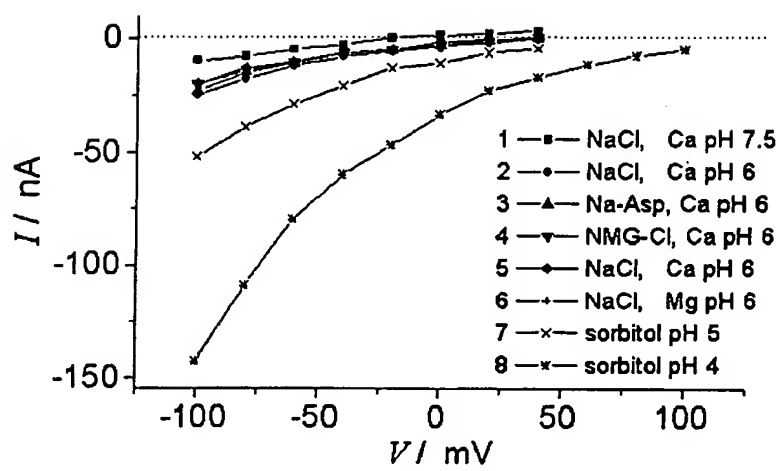


Fig. 2

a**b****Fig. 3**

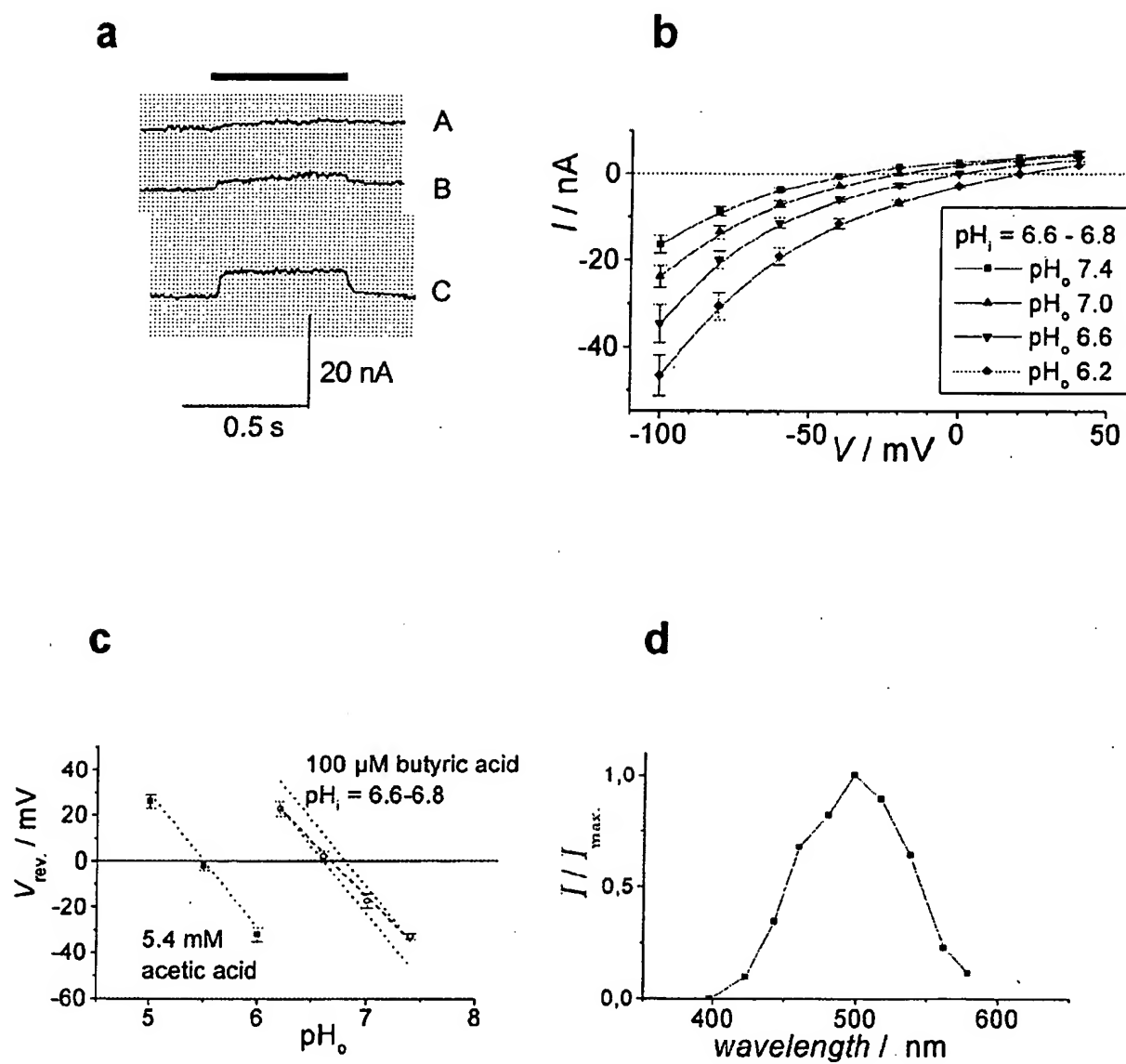


Fig. 4